

IN THE CLAIMS:

Please amend claims 1, 6 and 15 as follows. A detailed listing of all claims is as follows.

Claim 1 (Currently Amended): A method of driving a liquid crystal display, comprising:
registering a plurality of modulated data in a look-up table;
deriving a modulated data band including one modulated data having a gray scale
approximately corresponding to a gray scale value of source data from the plurality of the
modulated data and other modulated data adjacent to the one modulated data in a horizontal and
vertical directions ~~with respect to~~ within the look-up table; and
carrying out first and second approximations ~~in the horizontal and vertical directions with
respect to the look-up table on~~ based on the modulated data band to derive an approximate
modulated data not registered in the look-up table, thereby modulating the source data using the
approximate modulated data.

Claim 2 (Original): The method according to claim 1, further comprising:
dividing the source data into most significant bits and least significant bits; and
delaying each of the most significant bits and the least significant bits for a frame period.

Claim 3 (Previously Presented): The method according to claim 2, further comprising,
comparing the most significant bits of a current frame with those of the delayed frame within the
look-up table to derive the modulated data band in accordance with the compared result.

Claim 4 (Previously Presented): The method according to claim 1, wherein the carrying out first and second approximations includes:

carrying out the first approximation using current least significant bits along the horizontal direction within the modulated data band to derive two first approximate values existing on the horizontal direction; and

carrying out the second approximation using previous least significant bits on a line between the two first approximate values to derive the approximate modulated data.

Claim 5 (Previously Presented): The method according to claim 1, wherein the carrying out first and second approximations includes:

carrying out the first approximation using previous least significant bits along the vertical direction within the modulated data band to derive two first approximate values existing on the vertical direction; and

carrying out the second approximation using current least significant bits on a line between the two first approximate values to derive the approximate modulated data.

Claim 6 (Currently Amended): A driving apparatus for driving a liquid crystal display, comprising:

a look-up table having a plurality of registered modulated data and deriving a modulated data band including one modulated data having a gray scale approximately corresponding to a gray scale value of source data and other modulated data adjacent to the one modulated data in a horizontal and vertical directions ~~with respect to~~ within the look-up table; and

a modulator approximating in the horizontal and vertical directions within the modulated data band to derive an approximate modulated data not registered in the look-up table, thereby modulating the source data using the approximate modulated data.

Claim 7 (Original): The driving apparatus according to claim 6, further comprising:

a first frame memory delaying most significant bits of the source data; and

a second frame memory delaying least significant bits of the source data.

Claim 8 (Previously Presented): The driving apparatus according to claim 7, wherein the delayed most significant bits are compared with non-delayed most significant bits within the look-up table to derive the modulated data band in accordance with the compared result.

Claim 9 (Previously Presented): The driving apparatus according to claim 6, wherein the modulator includes:

a first approximation processor carrying out a first approximation using current least significant bits along the horizontal direction within the modulated data band to derive two first approximate values existing on the horizontal direction; and

a second approximation processor carrying out a second approximation using previous least significant bits on a line between the two first approximate values to derive the approximate modulated data.

Claim 10 (Previously Presented): The driving apparatus according to claim 6, wherein the modulator includes:

a first approximation processor carrying out a first approximation using previous least significant bits along the vertical direction within the modulated data band to derive two first approximate values existing on the vertical direction; and

a second approximation processor carrying out a second approximation using current least significant bits on a line between the two first approximate values to derive the approximate modulated data.

Claim 11 (Original): The driving apparatus according to claim 6, further comprising:
a data driver applying data modulated by using the modulator to the liquid crystal display;

a gate driver applying a scanning signal to the liquid crystal display; and

a timing controller applying the source data to the modulator and controlling the data driver and the gate driver.

Claim 12 (Previously Presented): The driving apparatus according to claim 6, further comprising a single frame memory delaying both most significant bit of the source data and least significant bit of the source data.

Claim 13 (Previously Presented): The driving apparatus according to claim 6, wherein the modulator includes a single approximation processor carrying out a first approximation using current least significant bits along the horizontal direction within the modulated data band to derive two first approximate values existing on the horizontal direction, and a second

approximation using previous least significant bits on a line between the two first approximate values to derive the approximate modulated data.

Claim 14 (Previously Presented): The driving apparatus according to claim 6, wherein the modulator includes:

a first approximation processor carrying out a first approximation using previous least significant bits along the vertical direction within the modulated data band to derive two first approximate values existing on the vertical direction; and

a second approximation processor carrying out a second approximation using current least significant bits on a line between the two first approximate values to derive the approximate modulated data.

Claim 15 (Currently Amended): A liquid crystal display, comprising:

a liquid crystal display panel displaying images;

a look-up table having a plurality of registered modulated data and deriving a modulated data band including one modulated data having a gray scale approximately corresponding to a gray scale value of source data and other modulated data adjacent to the one modulated data in a horizontal and vertical direction ~~with respect to~~ within the look-up table; and

a modulator approximating in the horizontal and vertical directions within the modulated data band to derive an approximate modulated data not registered in the look-up table, thereby modulating the source data using the approximated modulated data.